Amended Joint Claim Construction Chart

The parties prepared this amended chart in response to the Court's request to list no more than ten claim terms.

Cisco's Statement

Cisco notes that Arista has made changes to certain of its proposed constructions and evidence, which were not addressed as part of the claim construction briefing. Cisco has not had the opportunity to consider these changes. Cisco reserves all rights to object to these changes and/or to supplement its positions or evidence in light of these changes by Arista. For example, to the extent that Arista is permitted to make arguments based on Cisco's IPR filings, Cisco reserves the right to make arguments based on Arista's IPR filings relating to the patents-in-suit.

Arista's Statement

Arista's new citations are limited to intrinsic evidence that did not exist during the claim construction briefing. Specifically, Arista added citations to four pages of Cisco's Preliminary Patent Owner Response, which Cisco filed in connection with the IPR on the '526 patent on February 18, 2016.

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1036962.01

I.   '526 Patent

Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
A. "management programs"	*Proposed construction:* "separate tools or external agents having their own respective command formats that provide management functions" *Intrinsic Evidence:* The specification of the '526 patent, including: Abstract, col. 1:54-63; 1:64-68; 2:8-12; 2:13-15; 2:24-29; 3:1-15; Figures 1, 3. The prosecution history of the '526 patent, including prior art references cited therein, including: File History, Rejection, 1/15/2003; File History, Applicant Response, 4/16/2003; File History, Applicant Response, 10/7/2003. *Extrinsic Evidence:* None	*Proposed construction:* "tools that are configured to execute user-entered commands having their own respective command formats rather than the generic command format" This proposal assumes that the term "generic command format" is not found to be indefinite. *Intrinsic Evidence:* Abstract; Figs. 1-3; col. 1:6-63, 2:57-3:35; 4:19-36; 4:55-60; Appx. A & B. File History, 10/3/2003 Response to Office Action; 2/18/2004 Response to Office Action; 3/18/2004 Office Action; 6/18/2004 Response to Office Action; 11/11/2004 Office Action. *Extrinsic Evidence:* None

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
B. "generic command"	*Proposed construction:* "command that provides an abstraction of the tool-specific command formats and syntax, enabling a user to issue the command based on the relative functions, as opposed to the specific syntax for a corresponding tool" *Intrinsic Evidence:* The specification of the '526 patent, including: Title, Abstract; col. 1:58-63, 3:27-35, 3:47-51, 3:54-61; Figures 1, 2, 3. The prosecution history of the '526 patent, including prior art references cited therein, including: File History, Response after Final Rejection, 2/18/2004; File History, Rejection, 3/18/2004; File History, Applicant Response, 6/23/2004. *Extrinsic Evidence:* <u>Webster's Third New International Dictionary, 2002</u>: entry for "generic."	*Proposed construction:* Indefinite, OR if not indefinite: "command having a format and syntax that is an abstraction of the command formats and syntaxes of more than one management program, as opposed to the specific syntax for any such management program" *Intrinsic Evidence:* Abstract; Figs. 1-3; col. 1:6-63; 2:57-3:35; 4:19-36; 4:55-60; Appx. A & B. File History, 10/3/2003 Response to Office Action; 2/18/2004 Response to Office Action; 3/18/2004 Office Action; 6/18/2004 Response to Office Action; 11/11/2004 Office Action. *Extrinsic Evidence:* None

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
C. "command parse tree"	*Proposed construction:* "a hierarchical data representation having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value" *Intrinsic Evidence:* The specification of the '526 patent, including: Abstract; col. 1:48-54; 1:67-2:8; 2:15-24; 3:36-39; 3:47-57; 4:10-18; Figures 2, 3. The prosecution history of the '526 patent, including prior art references cited therein, including: File History, Rejection, 3/18/2004; File History, Applicant Response, 6/23/2004. *Extrinsic Evidence:* Alice E. Fischer et al., The Anatomy of Programming Languages 74-75 (1993). Allen I. Holub, Compiler Design In C 4 (1999). Microsoft Computer Dictionary 529 (5th ed. 2002). Computer Desktop Encyclopedia 991 (9th ed. 2001).	*Proposed construction:* "tree": "data structure consisting of linked nodes, with a root node (a node with no parent nodes), and where the remaining nodes are either a branch node (a node with a parent node and one or more children nodes), or a leaf node (a node with a parent node and no children nodes)" "command parse tree": "tree for interpreting commands where each node, or element, corresponds to one or more command components"[1] *Intrinsic Evidence:* Abstract; Figs. 2-3; col. 3:36-4:54, Appx. B. File History, 10/3/2003 Response to Office Action; 2/18/2004 Response to Office Action; 3/18/2004 Office Action; 6/18/2004 Response to Office Action; 11/11/2004 Office Action. *Extrinsic Evidence:* Microsoft Press Computer Dictionary, 3d ed. (1997): entry for "tree." Barron's Dictionary of Computer and Internet Terms, 6th ed. (1998): entry for "tree." Random House Webster's Computer & Internet Dictionary (1999): entry for "tree structure."

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[1] Arista initially proposed the following construction for "command parse tree": "tree for interpreting commands where each node corresponds to a command component." In response to Cisco's argument that a node or element may correspond to "at least one" (as opposed to just one) command component (Doc. 91 at 9), Arista has modified its construction as set forth above.

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
D. "the validating step including identifying one of the elements as a best match relative to the generic command"	*Proposed construction:* Plain and ordinary meaning (except that specific terms appearing within the phrase should be construed as proposed above) *Intrinsic Evidence:* The specification of the '526 patent, including: col. 1:64-2:8; Figure 2; Claims 1, 14. The prosecution history of the '526 patent, including prior art references cited therein. *Extrinsic Evidence:* None	*Proposed construction:* Indefinite, OR if not indefinite: "the validating step having the capability of both identifying the element in the parse tree that exactly matches the generic command, and, in the absence of an exact match, identifying the element that contains the last validated component of the generic command" *Intrinsic Evidence:* Abstract; Figs. 2-3; 3:36-4:54; Appx. A & B Patent Owner Preliminary Response, *Arista Networks, Inc., Petitioner v. Cisco Systems, Inc., Patent Owner*, Case IPR2016-00119, at 8–9, 27–28. *Extrinsic Evidence:* None

Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
E. "the command parse tree having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value"	*Proposed construction:* Plain and ordinary meaning (except that specific terms appearing within the phrase should be construed as proposed above) *Intrinsic Evidence:* The specification of the '526 patent, including: col. 1:64-2:8; Figures 1, 2, 3; Claims 1, 14. The prosecution history of the '526 patent, including prior art references cited therein. *Extrinsic Evidence:* None	*Proposed construction:* "elements": "nodes" "command action value": "piece of data that uniquely represents the prescribed command." the entire phrase: "the command parse tree having nodes, such that each node specifies a unique command action value for each generic command component." *Intrinsic Evidence:* Abstract; Figs. 2-3; col. 3:36-4:54; Appx. A & B. File History, 10/3/2003 Response to Office Action; 12/18/2003 Office Action; 6/18/2004 Response to Office Action; 11/11/2004 Office Action. Patent Owner Preliminary Response, *Arista Networks, Inc., Petitioner v. Cisco Systems, Inc., Patent Owner*, Case IPR2016-00119, at 8–9, 27–28. *Extrinsic Evidence:* None

Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
F. "means for validating a generic command received from a user, the validating means configured for specifying valid generic commands relative to a prescribed generic command format and having elements each specifying at least one corresponding generic command component and a corresponding at least one command action value, the validating means identifying one of the elements as a best match relative to the generic command"	*Proposed construction:* Function: validating a generic command received from a user Structure: Parser 14 in Figure 2, which includes the command word translation table 20 and the command parse tree 22, as described in 3:36-61, and equivalents *Intrinsic Evidence:* The specification of the '526 patent, including: col. 3:36-61; Figure 2. The prosecution history of the '526 patent, including prior art references cited therein, including: File History, Applicant Response, 6/23/2004. *Extrinsic Evidence:* Webster's Third New International Dictionary, 2002: entry for "validate."	*Proposed construction:* Functions: (1) validating a generic command received from a user (2) specifying valid generic commands relative to a prescribed generic command format, (3) having elements each specifying at least one corresponding generic component and a corresponding at least one command action value, and (4) identifying one of the elements as a best match relative to the generic command. Disclosed structure: A processor executing a parser, and a corresponding memory storing a command parse tree, wherein the parser executes the algorithm of Figure 3, and wherein (1) each node of the command parse tree specifies one token and a corresponding command key; (2) the top-level nodes of the command parse tree represent all possible valid first words in the input command, second-level nodes represent all possible valid second words for each valid first word in the input command, and so on; *Intrinsic Evidence:* Abstract; Figs. 2-3; col. 3:36-4:54; Appx. A & B. *Extrinsic Evidence:* None

II.   '886 Patent

Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
A. "extensible markup language (XML)"	*Proposed construction:* "extensible": a property of a computer language that allows the user to add new features or modify existing ones "markup language": a computer language that allows the user to add identifiers to a document for indicating logical components or layout *Intrinsic Evidence:* The specification of the '886 patent, including col. 3:10-7:21. The prosecution history of the '886 patent, including prior art references cited therein. *Extrinsic Evidence:* McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed (2003): entries for "Extensible language," "markup," and "markup language." Microsoft Computer Dictionary, 5th Ed. (2002): entry for "markup language." Dictionary of computer science, engineering, and technology (2001): entry for "markup language."	*Proposed construction:* "markup language defined by one of the versions of the XML standard published by the W3C organization" *Intrinsic Evidence:* Figs. 3 & 4; col. 1:49-57; 3:11-36; 4:24–42; 4:50-5:65; 6:12-7:17. File History, 9/4/2008 Response to Office Action; 10/17/2008 Office Action; 1/21/2009 Response to Office Action; 3/13/2009 Office Action; 6/15/2009 Response to Office Action; 12/8/2010 Response to Office Action. *Extrinsic Evidence:* Computer Desktop Encyclopedia, 9th Ed. (2001): entry for "XML (Extensible Markup Language)". Webster's New World Computer Dictionary, 9th Ed. (2001), 10th Ed. (2003): entry for ""XML Abbreviation for Extensible Markup Language." Microsoft Computer Dictionary, Fifth Edition (2002): entry for "XML." Barron's Dictionary of Computer and Internet Terms, 8th Ed. (2003): entry for "XML (Extensible Markup Language)." See generally http://www.w3.org/standards/xml/.

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
B. Cisco's proposed term: "command line interface (CLI) parser" Arista's proposed term: "receiving, with a command line interface (CLI) parser"	*Proposed construction:* "command line interface (CLI) parser": "a component of the routing system for analyzing command line interface (CLI) commands using a grammar" *Intrinsic Evidence:* The specification of the '886 patent, including Abstract, col. 1:41-64; 2:52-5:9; 6:11-24. The prosecution history of the '886 patent, including prior art references cited therein, including Amendments filed on 1/19/2010, 12/8/2010, and cited reference U.S. Patent No. 5,778,223. *Extrinsic Evidence:* Dictionary of computer science, engineering, and technology (2001): entry for "parsing." McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed (2003): entry for "parsing." Wiley electrical and electronics engineering dictionary (2004): entry for "parse."	*Proposed construction:* "receiving": "taking as an input" "a command line interface (CLI) parser": "a program that breaks down the individual sub-parts of a command using a CLI grammar" *Intrinsic Evidence:* Abstract, Figs. 1-4; Cols. 1:40-57; 1:61-2:5; 2:52-3:45; 3:60-4:33; 4:60-65. File History, 9/4/2008 Response to Office Action; 10/17/2008 Office Action; 1/21/2009 Response to Office Action; 3/13/2009 Office Action; 6/15/2009 Response to Office Action; 1/19/2010 Response to Office Action; 12/8/2010 Response to Office Action. *Extrinsic Evidence:* McGraw-Hill Dictionary of Computing and Communications (2003): entries for "parser" and "parsing." Dictionary of Computer and Internet Words, Houghton Mifflin Co. (2001): entry for "parse." Webster's New World Computer Dictionary, 9th Ed. (2001), 10th Ed. (2003): entry for "parser." Barron's Dictionary of Computer and Internet Terms, 8th Ed. (2003): entry for "parsing." Oxford Dictionary of Computing, 5th Ed. (2004): entry for "parsing."

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
		Dictionary of Computing, 5th Ed. (2004): entries for "parse" and "parser." Microsoft Computer Dictionary, Fifth Edition (2002): entries for "parse" and "parser." Computer Desktop Encyclopedia, 9th Ed. (2001): entries for "parse" and "parser."

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
C. "parsing the output message to identify at least one CLI token"	*Proposed construction:* analyzing the output message to extract at least one unit of CLI characters in a sequence *Intrinsic Evidence:* The specification of the '886 patent, including col. 6:30- 7:21. The prosecution history of the '886 patent, including prior art references cited therein, including Amendments filed on 1/21/2009 and 6/15/2009. *Extrinsic Evidence:* McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed (2003): entry for "token." Dictionary of computer science, engineering, and technology (2001): entry for "parsing."	*Proposed construction:* "breaking down the output message into its constituent character strings and determining that at least one such string corresponds to a CLI keyword or parameter" *Intrinsic Evidence:* Fig. 4; Tbl. 3; col 1:54-57; 6:24-49. File History: 6/15/2009 Response to Office Action. *Extrinsic Evidence:* None

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
D. "wherein the input command is configured in an extensible markup language (XML) format having a CLI syntax with CLI keywords sequenced according to configuration rules for CLI commands"	*Proposed construction:* Plain and ordinary meaning, except for "extensible markup language (XML) format" as construed below. *Intrinsic Evidence:* The specification of the '886 patent, including at col. 3:10-5:65. The prosecution history of the '886 patent, including prior art references cited therein. *Extrinsic Evidence:* <u>McGraw-Hill Dictionary of Scientific and Technical Terms, 6th Ed (2003)</u>: entries for "Extensible language," "markup," and "markup language." <u>Microsoft Computer Dictionary, 5th Ed. (2002)</u>: entry for "markup language." <u>Dictionary of computer science, engineering, and technology (2001)</u>: entry for "markup language."	*Proposed construction:* "an extensible markup language (XML) format": "a format that complies with one of the versions of the XML standard published by the W3C organization" "keyword": "word describing an action or operation that the computer can recognize and execute" The entire phrase: "wherein the input command is written in an extensible markup language (XML) format, such that one or more CLI keywords, on the one hand, and the CLI parameters, on the other, are contained within respective XML tags, and the sequence of the tags complies with the sequencing rules for keywords and parameters in the CLI grammar and syntax" *Intrinsic Evidence:* Figs. 3 & 4; cols. 1:49-57; 3:11-36; 4:24–42; 4:50-5:65; 6:12-7:17. File History: 9/4/2008 Response to Office Action; 10/17/2008 Office Action; 1/21/2009 Response to Office Action; 3/13/2009 Office Action; 6/15/2009 Response to Office Action; 12/8/2010 Response to Office Action. *Extrinsic Evidence:* <u>Computer Desktop Encyclopedia, 9th Ed. (2001)</u>: entry for "XML (Extensible Markup Language)." <u>Webster's New World Computer Dictionary, 9th Ed. (2001), 10th Ed. (2003)</u>: entry for ""XML Abbreviation for Extensible Markup Language." <u>Microsoft Computer Dictionary, Fifth Edition (2002)</u>: entry for

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Term	Cisco's Proposed Construction And Evidence	Arista's Proposed Construction And Evidence
		"XML." Barron's Dictionary of Computer and Internet Terms, 8th Ed. (2003): entry for "XML (Extensible Markup Language)." See generally http://www.w3.org/standards/xml/. Webster's New World Computer Dictionary, 9th Ed. (2001), 10th Ed. (2003): entry for "keyword." Dictionary of Computer and Internet Words, Houghton Mifflin Co. (2001): entry for "keyword." Computer Desktop Encyclopedia, 9th Ed. (2001): entry for "keyword." Dictionary of Computing, 5th Ed. (2004): entry for "keyword."

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